

**Amendments to the Claims:**

Please amend claims 1, 3-5, 7-8, 12-14, 17, 19-21, 23-27, and 29-30 in accordance with the list of claims that begins on the following page, and which replaces all prior versions of claims in the application.

List of Claims:

1. (currently amended) A tangible signal bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform a method for ensuring consistency of a group ~~[[of data objects]]~~, the method comprising the following operations:

receiving a first list, wherein the first list identifies a first group of objects that identifies objects in the group;

for each object identified in the first group, gathering, ~~for at least one attribute, the a~~ value of ~~[[the]]~~ an attribute ~~[[for each]]~~ corresponding with the object ~~[[identified in the first list]]~~, so each gathered attribute value is associated with a corresponding object identified in the first group;

storing, at a time  $t_1$ , the first list that identifies the first group of objects, and the value of the attribute values gathered in the gathering operation, corresponding with each object in the first group of objects, to create a first snapshot of the first list that identifies the first group of objects and the ~~[[gathered]]~~ attribute ~~[[values]]~~ value corresponding with each object in the first group of objects;

after at least part of a task is performed, receiving a second list, ~~that identifies objects that are in the group after at least part of a task is performed,~~ wherein the second list identifies a second group of objects, and receiving, for each object identified in the second group, and the value after at least part of the task is performed a value of the ~~[[at least one]]~~ attribute corresponding with the ~~[[for each]]~~ object ~~[[identified in the second list]]~~, so each received attribute value is associated with a corresponding object identified in the second group;

storing, at a time  $t_2$ , the second list that identifies the second group of objects, and the ~~[[received]]~~ value of the attribute ~~[[values,]]~~ corresponding with each object in the second group of objects, to create a second snapshot of the second list that identifies the second group of objects and the ~~[[received]]~~ attribute ~~[[values]]~~ value corresponding with each object in the second group of objects; and

comparing the first snapshot with the second snapshot.

2. (original) The signal bearing medium of claim 1, wherein the operations further comprise failing the task if the first snapshot and the second snapshot are not the same.
3. (currently amended) The signal bearing medium of claim 2, wherein the comparing and failing operations comprise:
  - determining if all of the objects identified in the first list are identified in the second list and if all of the objects identified in the second list are identified in the first list;
  - and if not, failing the task;
  - and if so, for each object identified in the first list, determining if the value of the [[at least one]] attribute for each object identified in the first list corresponding with the object is the same as the value of the [[at least one]] attribute [[for]] corresponding with the same object identified in the second list,
  - and if not, failing the task;
  - and if so, committing the task.
4. (currently amended) The signal bearing medium of claim 1, wherein the operations ~~further comprise performing at least part of the task~~ attribute is a timestamp.
5. (currently amended) The signal bearing medium of claim [[4]] 1, wherein the task comprises backing up the objects identified in the first list.
6. (original) The signal bearing medium of claim 5, wherein the operation of performing at least part of the task comprises transmitting the objects identified in the first list from at least one client to a backup storage server.
7. (currently amended) The signal bearing medium of claim [[6]] 1, wherein ~~the operation of performing at least part of the task further comprises sending the objects identified in the first list to a backup storage server~~ the attribute is size.
8. (currently amended) The signal bearing medium of claim [[7]] 6, wherein the operation of performing at least part of the task further comprises:

determining if all of the objects identified in the first list have been successfully stored on ~~[[the]]~~ a backup storage,  
and if not, failing the task of backing up the objects identified in the first list.

9. (original) The signal bearing medium of claim 8, wherein the operation of failing the task comprises rolling back at least one commit by the server.

10. (original) The signal bearing medium of claim 1, wherein the task comprises performing an installation.

11. (original) The signal bearing medium of claim 1, wherein the task comprises performing a query.

12. (currently amended) The signal bearing medium of claim 1, wherein the first group is a Cross Transaction Logical Object Group.

13. (currently amended) The signal bearing medium of claim 1, wherein ~~the first snapshot corresponds with a time t1, and the second snapshot corresponds with a time t2, wherein t1 is~~ before t2.

14. (currently amended) The signal bearing medium of claim 1, wherein the operation of receiving a first list ~~that identifies objects in the group~~ comprises generating the first list.

15. (original) The signal bearing medium of claim 14, wherein generating the first list comprises scanning a subset of a filesystem's directories.

16. (original) The signal bearing medium of claim 14, wherein generating the first list comprises scanning at least one directory on each of a plurality of clients.

17. (currently amended) The signal bearing medium of claim 14, wherein the operation of receiving a second list ~~that identifies objects in the group after at least part of the task is performed~~ comprises generating the second list.

18. (original) The signal bearing medium of claim 17, wherein generating the second list comprises scanning a subset of a filesystem's directories.

19. (currently amended) The signal bearing medium of claim 17,  
wherein the operations further comprise failing the task if the first snapshot and the second snapshot are not the same; and  
wherein the comparing and failing operations comprise:  
determining if the first list and the second list identify the same objects;  
and if not, failing the task;  
and if so, for each object identified in the first list, determining if the value of the  
[[at least one]] attribute for each object identified in the first list corresponding with the  
object is the same as the value of the [[at least one]] attribute [[for]] corresponding with  
the same object identified in the second list,  
and if not, failing the task;  
and if so, committing the task.

20. (currently amended) A tangible signal bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform a method for ensuring consistency of a logical group, the method comprising the following operations:

generating a first list, wherein the first list identifies a first group of objects that identifies  
objects in the group;

for each object identified in the first group, gathering, for at least one attribute, the value  
of the attribute for each object identified in the first list a timestamp corresponding with the  
object, so each gathered timestamp value is associated with a corresponding object identified in  
the first group;

storing, at a time  $t_1$ , the first list that identifies the first group of objects, and the value of  
the timestamp attribute values gathered in the gathering operation, corresponding with each

object in the first group of objects, to create a first snapshot of the first list that identifies the first group of objects and the gathered attribute values timestamp value corresponding with each object in the first group of objects;

waiting for at least part of a task of backing up the objects in the first group to be performed;

after at least part of the task is performed, generating, a second list ~~that identifies objects that are in the group after at least part of the task is performed~~, wherein the second list identifies a second group of objects, and receiving, for each object identified in the second group, a value of a timestamp corresponding with the object, so each received attribute value is associated with a corresponding object identified in the second group;

~~gathering the value after at least part of the task is performed, of the at least one attribute, for each object identified in the second list;~~

storing, at a time  $t_2$ , the second list that identifies the second group of objects, and the ~~gathered attribute values for each object identified in the second list~~ value of the timestamp corresponding with each object in the second group of objects, to create a second snapshot of the second list that identifies the second group of objects and the ~~gathered attribute values~~ timestamp value corresponding with each object in the second group of objects;

determining if the first list identifies the same objects as the second list;

and if not, failing the task;

and if so, for each object identified in the first list, determining if the value of the ~~at least one attribute for each object identified in the first list~~ timestamp corresponding with the object is the same as the value of the ~~at least one attribute for~~ timestamp corresponding with the same object identified in the second list,

and if not, failing the task;

and if so, committing the task.

21. (currently amended) A computing system, comprising:

a memory; and

a processing device coupled to the memory, wherein the processing device is programmed to perform operations for ensuring consistency of a group, the operations comprising:

Application No. 10/764,069  
Attorney Docket No. SJO920030084US1

-7-

receiving a first list, wherein the first list identifies a first group of objects that identifies objects in the group;

for each object identified in the first group, gathering, for at least one attribute, the a value of [[the]] an attribute [[for each]] corresponding with the object [[identified in the first list]], so each gathered attribute value is associated with a corresponding object identified in the first group;

storing, at a time  $t_1$ , the first list that identifies the first group of objects, and the value of the attribute values gathered in the gathering operation, corresponding with each object in the first group of objects, to create a first snapshot of the first list that identifies the first group of objects and the [[gathered]] attribute [[values]] value corresponding with each object in the first group of objects;

after at least part of a task is performed, receiving a second list, that identifies objects that are in the group after at least part of a task is performed, wherein the second list identifies a second group of objects, and receiving, for each object identified in the second group, and the value after at least part of the task is performed a value of the [[at least one]] attribute corresponding with the [[for each]] object [[identified in the second list]], so each received attribute value is associated with a corresponding object identified in the second group;

storing, at a time  $t_2$ , the second list that identifies the second group of objects, and the [[received]] value of the attribute [[values,]] corresponding with each object in the second group of objects, to create a second snapshot of the second list that identifies the second group of objects and the [[received]] attribute [[values]] value corresponding with each object in the second group of objects; and

comparing the first snapshot with the second snapshot.

22. (original) The computing system of claim 21, wherein the operations further comprise failing the task if the first snapshot and the second snapshot are not the same.

23. (currently amended) The computing system of claim 22, wherein the comparing and failing operations comprise:

determining if all of the objects identified in the first list are identified in the second list and if all of the objects identified in the second list are identified in the first list;

and if not, failing the task;

and if so, for each object identified in the first list, determining if the value of the [[at least one]] attribute for each object identified in the first list corresponding with the object is the same as the value of the [[at least one]] attribute [[for]] corresponding with the same object identified in the second list,

and if not, failing the task;

and if so, committing the task.

24. (currently amended) The computing system of claim 21, wherein the ~~operations further comprise performing at least part of the task~~ attribute is a timestamp.

25. (currently amended) The computing system of claim 24, wherein the operation of receiving a first list that identifies objects in the first group comprises generating the first list, and the operation of receiving a second list that identifies objects in the second group after at least part of the task is performed comprises generating the second list.

26. (currently amended) A computing system, comprising:

means for receiving a first list, wherein the first list identifies a first group of objects that identifies objects in the group;

means for, for each object identified in the first group, gathering, for at least one attribute, the a value of [[the]] an attribute [[for each]] corresponding with the object [[identified in the first list]], so each gathered attribute value is associated with a corresponding object identified in the first group;

means for storing, at a time  $t_1$ , the first list that identifies the first group of objects, and the value of the attribute values gathered in the gathering operation, corresponding with each object in the first group of objects, to create a first snapshot of the first list that identifies the first group of objects and the [[gathered]] attribute [[values]] value corresponding with each object in the first group of objects;

after at least part of a task is performed, means for receiving, a second list, that identifies objects that are in the group after at least part of a task is performed, wherein the second list identifies a second group of objects, and receiving, for each object identified in the second group,



~~and the value after at least part of the task is performed~~ a value of the [[at least one]] attribute corresponding with the [[for each]] object [[identified in the second list]], so each received attribute value is associated with a corresponding object identified in the second group;

means for storing, at a time  $t_2$ , the second list that identifies the second group of objects, and the [[received]] value of the attribute [[values,]] corresponding with each object in the second group of objects, to create a second snapshot of the second list that identifies the second group of objects and the [[received]] attribute [[values]] value corresponding with each object in the second group of objects; and

means for comparing the first snapshot with the second snapshot.

27. (currently amended) A method for ensuring consistency of a group, comprising the following operations:

receiving a first list, wherein the first list identifies a first group of objects that identifies objects in the group;

for each object identified in the first group, gathering, ~~for at least one attribute, the a~~ value of [[the]] an attribute [[for each]] corresponding with the object [[identified in the first list]], so each gathered attribute value is associated with a corresponding object identified in the first group;

storing, at a time  $t_1$ , the first list that identifies the first group of objects, and the value of the attribute ~~values gathered in the gathering operation,~~ corresponding with each object in the first group of objects, to create a first snapshot of the first list that identifies the first group of objects and the [[gathered]] attribute [[values]] value corresponding with each object in the first group of objects;

~~after at least part of a task is performed,~~ receiving a second list, ~~that identifies objects that are in the group after at least part of a task is performed,~~ wherein the second list identifies a second group of objects, and receiving, for each object identified in the second group, ~~and the value after at least part of the task is performed~~ a value of the [[at least one]] attribute corresponding with the [[for each]] object [[identified in the second list]], so each received attribute value is associated with a corresponding object identified in the second group;

storing, at a time  $t_2$ , the second list that identifies the second group of objects, and the [[received]] value of the attribute [[values,]] corresponding with each object in the second group

of objects, to create a second snapshot of the second list that identifies the second group of objects and the [[received]] attribute [[values]] value corresponding with each object in the second group of objects; and

comparing the first snapshot with the second snapshot.

28. (original) The method of claim 27, wherein the operations further comprise:  
performing at least part of the task; and  
failing the task if the first snapshot and the second snapshot are not the same.

29. (currently amended) The method of claim 28, wherein the comparing and failing operations comprise:

determining if all of the objects identified in the first list are identified in the second list and if all of the objects identified in the second list are identified in the first list;

and if not, failing the task;

and if so, for each object identified in the first list, determining if the value of the [[at least one]] attribute for each object identified in the first list corresponding with the object is the same as the value of the [[at least one]] attribute [[for]] corresponding with the same object identified in the second list,

and if not, failing the task;

and if so, committing the task.

30. (currently amended) The method of claim 29:  
wherein the operation of receiving a first list that identifies objects in the first group comprises generating the first list, and the operation of receiving a second list that identifies objects in the second group after at least part of the task is performed comprises generating the second list; and

wherein the task comprises backing up the objects identified in the first list.